

Search: JP2001028433.PI,PN.

Basic Patent Number **JP 2001028433 A**

Patent Assignee SONY CORP (SONY-C)

Derwent Title CMOS type solid state image pick-up element, has N-type semiconductor area formed on either sides of gate electrode in which N-type semiconductor layer is formed in surface region

Title Terms CMOS TYPE SOLID STATE IMAGE PICK UP ELEMENT N SEMICONDUCTOR AREA FORMING SIDE GATE ELECTRODE LAYER SURFACE REGION

Novelty JP-2001028433-A:
Wiring layer is formed on semiconductor substrate through an insulating film. N-type semiconductor area (64) is formed on either sides of the gate electrode (69). P-type semiconductor layer (71) is formed in the surface region of N-type semiconductor area near gate electrode side end and element separated layer end side. The P-type semiconductor layer grows in the semiconductor area.

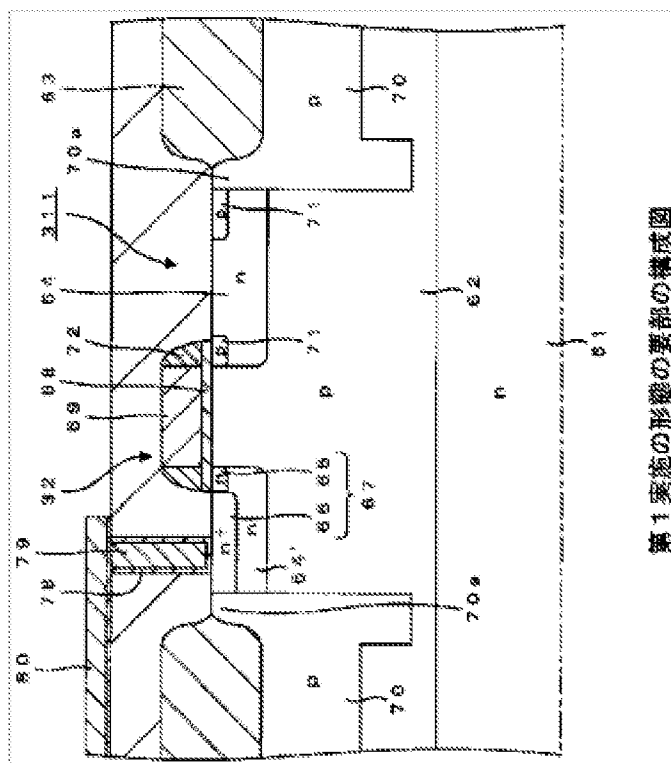
Use CMOS type solid state image pick-up element.

Advantage Reduces current leakage. Secures high sensitivity and low dark current condition of image pick-up element.
Reduces power consumption.

Detailed Description INDEPENDENT CLAIMS are also included for the following:

- (a) Semiconductor device;
- (b) Solid state image pick-up element manufacturing method

Main Drawing JP-2001028433 A



Description of Drawing

The figure shows the sectional view of image pick-up element.

N-type semiconductor area (64)

Gate electrode (69)

P-type semiconductor layer (71)

Patent Information JP 2001028433 A 2001-01-30 H01L027-146 200201 BASIC

IPC **H01L027-146**

H04N005-335

Derwent Classes U13 W04

Manual Codes **EMC** U13-A01B W04-M01B

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